



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Inventor: Timothy Birkmann

Patent No.: 6,832,504 B1

Serial No.: 10/718,001

Issued: December 21, 2004

Filed: November 19, 2003

For: LIQUID SENSING SYSTEM FOR AN
AIRCRAFT GALLEY COOLER USING A
TWO PHASE WORKING FLUID

Examiner: Michael Cygan

Group Art Unit: 2855

Docket No.: BEINT-64758

March 1, 2005
Los Angeles, California

Certificate
MAR 22 2005
of Correction

REQUEST FOR CERTIFICATE OF CORRECTION

Certificate of Corrections Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The above-identified patent has been found to have the error set forth in the enclosed Certificate of Correction. It is requested that this Certificate of Correction be issued and returned to us. Since the error occurred in the final printing phase of the patent, no fee is enclosed. However, should the Office determine that a fee is required, please charge our account no. 06-2425.

The error are verifiable in the patent application file as follows:

MAR 23 2005

PATENT

<u>ERROR</u>	<u>VERIFICATION</u>
Column 5, line 38, delete "blower" and insert -- blower 24--.	See page 8, line 23 of Specification.

We respectfully request that this Certificate of Correction be expeditiously issued since the error reported herein were incurred through the fault of the United States Patent and Trademark Office.

Attached hereto, in duplicate, is Form PTO-1050, with at least one copy being suitable for printing.

A duplicate of this document is attached.

Respectfully submitted,

FULWIDER PATTON LEE & UTECHT, LLP

By:

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JWP/pp

Enclosures

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81172.1

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Serial No.: 10/718,001
Atty. Docket: BEINT-64758

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

PATENT NO. : 6,832,504 B1

DATED : December 21, 2004

INVENTOR(S) : **Timothy Birkmann**

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 5, line 38, delete "blower" and insert --blower 24--.

81168.1

MAILING ADDRESS OF SENDER:

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PATENT NO. 6,832,504 B1

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This collection of information is required by 37 CFR 1.322 and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief of Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450 Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORM TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner of Patents P.O. Box 1450 Alexandria, VA 22313-1450

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electronic devices may also be configured to monitor the pressure and volume within the expansion tank. The recirculation units may be controlled by turning the pumps on and off or by varying the speeds by which the pumps operate.

Other electronic devices may also be used to monitor and control the remote
5 chillers. By monitoring the pressure and temperature within the remote chiller the electronic devices can appropriately determine which remote chillers to operate at different times.

The electronic subsystem may be powered by the electrical power systems of the aircraft. The electronic subsystem may also include any number of display
10 systems and interfaces for control by the crew. An overall control system may operate each individual electronic device.

The entire system and each individual component should be configured for operation within the unique environment presented by transport aircraft.

Equipment used on commercial aircraft must meet strict requirements. In addition
15 to maintaining food at safe temperatures, general aircraft operating requirements must be met.

As depicted in FIG. 1, several components combine to form a galley air cooling unit 18. A galley cart 20 is typically stored within a galley plenum 22 while storing food. To safely store the food, the air within the galley cart must be
20 stored at or below a specific temperature. For example, 4° C (39° F) is the temperature required by certain agencies. The galley plenum is equipped with gaskets to form an air tight seal with the galley cart. The galley plenum may be equipped with a blower 24 or fan which circulates air throughout the galley cart and over at least one heat exchanger 26 within the galley plenum. Ducts 25 between the
25 galley cart and the galley plenum direct the flow of air across the stored food.

The heat exchanger 26 within the galley plenum 22 may include a plate and fin configuration optimized for removing heat from passing air. The heat exchanger 26 provides for the exchange of thermal energy between ambient air and a liquid refrigerant, also referred to as a heat transfer fluid, or the intermediate working fluid 27. A known heat transfer fluid having appropriate thermal and
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